

Claim 1 recites a device for controlling an exposure of an electronic camera, said camera being mounted on an electronic apparatus having a display and the camera being capable of setting a photographing direction to at least a forward or a rearward direction of the electronic camera, said device comprising exposure detecting means for generating exposure detection information indicative of the average magnitude of said video signals of a photographed image based on video signals generated by the electronic camera; exposure adjusting means for adjusting the exposure of the electronic camera based on said exposure detection information generated by said exposure detecting means; and photographing direction detecting means for outputting a corresponding direction detection signal when the photographing direction of the electronic camera is set to the rearward direction, wherein the exposure detecting means logically divides one photographed image according to first and second patterns, and in the division by said first pattern, divides said photographed image into an upper area and a lower area to generate first exposure detection information relatively strongly reflecting the magnitude of said video signal corresponding to said lower area; and in the division by said second pattern, divides the photographed image into a central area and a peripheral area to generate second exposure detection information relatively strongly reflecting the magnitude of the video signal corresponding to said central area and, when said photographing direction detecting means outputs said direction detection signal, said exposure adjusting means adjusts the exposure of the electronic camera on the basis of said first exposure detection information, and when the photographing direction detecting means does not output a direction detection signal, the exposure adjusting means adjusts the exposure of the electronic camera on the basis of said second exposure detection information.

In summary, the present invention is directed to an apparatus that enables a photographer to photograph himself by directing the camera head towards his person, and enables the photographer to photograph an object or scenery by directing the camera head in the direction of the object or scenery. In this case, in order to attain a proper exposure in both cases, the direction of the camera head is detected, and based on this detection, exposure control is automatically performed.

McNelley discloses a technique in which the photographer may photograph himself by directing the camera head toward his person, and in addition photograph an object or scenery by directing the camera head in the direction of the object or scenery. *McNelley*, however, is silent about performing an exposure control based on the direction of the camera head. The Office

Action acknowledges that *McNelley* fails to disclose, teach, or suggest at least controlling an exposure of the electronic camera. Namely, *McNelley* fails to disclose, teach, or suggest at least when said photographing direction detecting means outputs said direction detection signal, said exposure adjusting means adjusts the exposure of the electronic camera based on said first exposure detection information, and when the photographing direction detecting means does not output a direction detection signal, the exposure adjusting means adjusts the exposure of the electronic camera based on said second exposure detection information. In addition, *McNelley* fails to disclose, teach, or suggest at least outputting a corresponding direction detection signal when the photographing direction of the electronic camera is set to the rearward direction. The Office Action alleges that *Takashi* remedies this deficiency.

Takashi discloses an image pickup device that processes a captured image by dividing the image into a plurality of areas. The device then determines the average value of a designated area of the image signal. Based upon the value the designated area exposure control is performed on that portion of the image signal. In this control process, the device estimates the luminance distribution in the image frame based on the illumination in the representative scene, sets the light metering area such that a large automatic exposure calculating coefficient is assigned to an area that provides effective information for the determination of the exposure.

Takahashi, however, fails to disclose, teach, or suggest at least when said photographing direction detecting means outputs said direction detection signal, said exposure adjusting means adjusts the exposure of the electronic camera based on said first exposure detection information, and when the photographing direction detecting means does not output a direction detection signal, the exposure adjusting means adjusts the exposure of the electronic camera based on said second exposure detection information. In contrast, *Takahashi* merely discloses that the exposure control is performed automatically based on the estimated luminance distribution in the image, and does not disclose, teach, or suggest that the direction in which the camera captures the image is a factor in exposure control. The final Office Action alleges that at col. 9, lines 37-65 *Takahashi* teaches this element. However, upon further analysis this portion of *Takahashi* discloses the process for setting and releasing the control parameters in the automatic exposure control process. *Takahashi* fails to teach or suggest that these parameters are in any way related to adjusting the exposure based on first exposure detection information and second exposure information as recited in the claim. At best, *Takahashi* discloses that exposure parameters are selected and released based on the amount of luminance in a particular area of the image. The

final rejection failed to address and/or dispute at least this finding, which infers that any opposing arguments have been acquiesced. Thus, Applicant respectfully submits that the Office Action acknowledges that *Takahashi* fails to remedy the deficiencies of *McNelley* concerning this issue.

Fullam discloses a camera having an orientation sensor that outputs a left orientation or right orientation signal to indicate the orientation of the camera when an image is captured. The camera device uses measurement zones A, B, C, and D to perform exposure control. Based on the output orientation signal, the device determines where the measurement zones are located on the image, so that exposure control can be performed based on the location of the measurement zones. These measurement zones A, B, C, and D are always oriented such that a combination of two zones are associated with either the top or bottom of the image (Figs. 9A-9B; col. 7, lines 35-65).

Fullam fails to disclose, teach, or suggest that these measurement zones are patterns, or that in the division by said second pattern, the photographed image is divided into a central area and a peripheral area to generate second exposure detection information relatively strongly reflecting the magnitude of the video signal corresponding to said central area. Moreover, *Fullam* fails to disclose, teach, or suggest at least that when said photographing direction detecting means outputs said direction detection signal, said exposure adjusting means adjusts the exposure of the electronic camera based on said first exposure detection information, and when the photographing direction detecting means does not output a direction detection signal, the exposure adjusting means adjusts the exposure of the electronic camera based on said second exposure detection information. In contrast, *Fullam* discloses that the photographed image is divided into a top and a bottom portion.

In summary, the combination of *McNelley* and *Takahashi* discloses an image pickup device that is capable of capturing an image of an object located in front of or behind the screen. Exposure control is performed automatically on this image by dividing the image into a plurality of areas, estimating the luminance distribution in the image based on an average value determined in a designated area, and adjusting the luminance value based on the estimation. *Fullam* discloses dividing a photographed image into measurement zones based on an orientation signal, so that exposure control can be performed based on the location of the measurement zones.

However, *McNelley*, *Takahashi*, and *Fullam* either singly or combined fail to disclose, teach, or suggest at least that when said photographing direction detecting means outputs said direction detection signal, said exposure adjusting means adjusts the exposure of the electronic camera based on said first exposure detection information, and when the photographing direction detecting means does not output a direction detection signal, the exposure adjusting means adjusts the exposure of the electronic camera based on said second exposure detection information. The Office Action failed to dispute this point and appears to acknowledge that the combined references fail to teach at least this element. Accordingly, Applicant respectfully submits that a *prima facie* case for obviousness has not been established.

To establish *prima facie* obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Moreover, obviousness "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." *ACS Hosp. Sys. V. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). For at least the foregoing reasons, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. §103 be withdrawn and this claim be allowed.

Claims 2, 3, 5-10, and 12 depend from claim 1. By virtue of this dependency, Applicant submits that claims 2, 3, 5-10, and 12 are allowable for at least the same reasons given above with respect to claim 1. In addition, Applicant submits that claims 2, 3, 5-10, and 12 are further distinguished over *McNelley*, *Takahashi*, and *Fullam* by the additional elements recited therein, and particularly with respect to each claimed combination. Applicant respectfully requests, therefore, that the rejection of claims 2, 3, 5-10, and 12 under 35 U.S.C. §103 be withdrawn, and these claims be allowed.

Claims 11 and 13 were rejected under 35 U.S.C. §103(a) as unpatentable over *McNelley*, *Takahashi*, and *Fullam* and further in view of *Ma*, U.S. Patent No. 5,880,783. Applicant respectfully traverses this rejection.

Claims 11 and 13 depend from claim 1. By virtue of this dependency, Applicant submits that claims 11 and 13 are allowable for at least the same reasons given above with respect to claim 1. In addition, Applicant submits that claims 11 and 13 are further distinguished over *McNelley*, *Takahashi*, *Fullam*, and *Ma* by the additional elements recited therein, and particularly with respect to each claimed combination. Applicant respectfully requests,

therefore, that the rejection of claims 11 and 13 under 35 U.S.C. §103 be withdrawn, and these claims be allowed.

Claims 2 and 4 were rejected under 35 U.S.C. §103(a) as unpatentable over *McNelley*, *Takahashi*, and *Fullam* and further in view of *Yoshimura et al.*, U.S. Patent No. 5,667,733. Applicant respectfully traverses this rejection.

Claims 2 and 4 depend from claim 1. By virtue of this dependency, Applicant submits that claims 2 and 4 are allowable for at least the same reasons given above with respect to claim 1. In addition, Applicant submits that claims 2 and 4 are further distinguished over *McNelley*, *Takahashi*, *Fullam*, and *Yoshimura* by the additional elements recited therein, and particularly with respect to each claimed combination. Applicant respectfully requests, therefore, that the rejection of claims 2 and 4 under 35 U.S.C. §103 be withdrawn, and these claims be allowed.

Conclusion

Based on at least the foregoing amendments and remarks, Applicants submit that claims 1-13 are allowable, and this application is in condition for allowance. Accordingly, Applicants request favorable reexamination and reconsideration of the application. In the event the Examiner has any comments or suggestions for placing the application in even better form, Applicants request that the Examiner contact the undersigned attorney at the number listed below.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. SON-2147 from which the undersigned is authorized to draw.

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Respectfully submitted,

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